7. DETROIT RIVER

(1) **Chart Datum, Detroit River.**–Depths and vertical clearances under overhead cables and bridges given in this chapter are referred to the sloping surface of the river corresponding to a Lake St. Clair stage of 572.3 feet (174.4 meters) and a Lake Erie stage of 569.2 feet (173.5 meters) above mean water level at Rimouski, Quebec, on International Great Lakes Datum 1985 (IGLD 1985), which elevations are the planes of Low Water Datum for the two lakes. (See Chart Datum, Great Lakes System, indexed as such, chapter 1.)

(2) **General description.–Detroit River** is about 32 miles long from Detroit River Light at its mouth in Lake Erie to Windmill Point Light at the head of the river at Lake St. Clair.

(3) The lower part of the river is broad and is filled by many islands and shallow expanses. The river banks in this part are more flatly sloping than those in the upper river. The river bottom is generally earth and boulders, except for a section of bedrock and boulders about 6 miles N of the lower end of Bois Blanc Island. Extensive rock excavation and dredging have been necessary to provide channels for deep-draft vessels.

(4) The upper 13 miles of the river is a single deep channel, except at its head where it is divided by Peach Island and Belle Isle. The river banks in this stretch are quite steep, and the bottom is earth.

(5) **Canadian Waters**.–Once upstream of Detroit River Light, the **International Boundary** either parallels the main ships channels of the Detroit River, or lays within the same. For a detailed description of the Canadian shoreline/facilities in the Detroit River consult **Canadian Sailing Directions CEN304, Chapter 1, Detroit River**

(6) **Channels.**–Two dredged channels lead from Lake Erie to the mouth of Detroit River. East Outer Channel, a two-way passage, extends NNW from the lake to Detroit River Light. West Outer Channel passes W of the light and provides a passage for vessels of moderate draft bound for Monroe or Toledo.

(7) Above Detroit River Light, lower Livingstone Channel is a two-way passage to the junction with Amherstburg Channel. From the junction, the two channels extend N to the junction with Ballards Reef Channel, Amherstburg Channel for upbound traffic and Livingstone Channel for downbound traffic. Ballards Reef and Fighting Island Channels lead from the upper junction of Amherstburg and Livingstone Channels to the N end of Fighting Island. From here, natural deep water can be carried to the upper end of Belle Isle, thence a dredged channel leads to Lake St. Clair.

(8) The channels through the river are well marked by lights and buoys.

(9) **Anchorage.**–Numerous submerged pipelines and cables are in Detroit River. Vessel masters are advised to exercise caution when coming to anchor in the river.

(10) **Fluctuations of water level.**–Each year the normal seasonal fluctuations produce a difference of about 2 feet between the highest and lowest monthly mean levels in the river. However, strong E or W winds can raise or lower, respectively, the water levels in the W end of Lake Erie and in the lower Detroit River by as much as 6 feet within 8 hours. Atmospheric pressure changes may cause temporary water level fluctuations of 1 foot or more.

(11) On the 5th and 20th of each month the District Engineer, Corps of Engineers, Detroit, publishes a bulletin of the predicted range of water levels. (See appendix for address.)

(12) Water level information for the Gibralter area may be obtained by contacting Detroit Coast Guard Group on VHF-FM channel 16. The information is given in whole inches above or below chart datum. In addition, Detroit Group at the beginning of the scheduled radio broadcast notice to mariners (see schedule in the appendix) includes this information.

(13) **Currents, Detroit River.**–The following currents are based on the averages of water flow through the entire cross section of the river, that is, from bank to bank and from the surface to the bottom during normal water flow conditions. Normal water flow conditions are encountered when there is no wind, Lake St. Clair is at a stage of 573.9 feet (174.9 meters), and the lower Detroit River (Lake Erie) stage is 571.0 feet (174.0 meters) above mean water level at Rimouski, Quebec, on International Great Lakes Datum 1985 (IGLD 1985), that is 1.6 feet (0.5 meter) and 1.8 feet (0.5) meter) above their respective Low Water Datums. The current encountered at midstream is usually about 1.5 times the average velocity. Greater velocities may be expected when the difference between the lake levels is greater, or when lake stages are higher.

(14) Currents for the following locations on the Detroit River are given at high water flow of 210,000 cubic feet per second (cfs), medium water flow of 184,000 cfs, and low water flow of 170,000 cfs, respectively.

(15) Livingstone Channel Upper Entrance Light: 0.8 mph (0.7 knots), 0.7 mph (0.6 knots), and 0.7 mph (0.6 knots)

(16) Fighting Island Channel North Light: 1.5 mph (1.3 knots), 1.5 mph (1.3 knots), and 1.4 mph (1.2 knots)

(17) 1.7 miles below the Ambassador Bridge: 1.6 mph (1.4 knots), 1.4 mph (1.3 knots), and 1.3 mph (1.2 knots)

(18) Lower end of Belle Isle: 1.4 mph (1.2 knots), 1.3 mph (1.1 knots), and 1.2 mph (1.0 knot)

(19) Peche Island Light: 1.5 mph (1.3 knots), 1.4 mph (1.2 knots), and 1.2 mph (1.1 knots).

(20) **Weather, Detroit River and vicinity.**–Detroit, MI, is located near the west shore of Lake Erie and in the southwestern part of the state on a rather large isthmus of land that separates Lake Erie from Lake Huron. Within this isthmus lies the Detroit river which not only acts as a natural border between Ontario and Michigan, but also serves to connect Lake Erie with Lake St. Clair. Detroit averages about 12 days each year with maximum temperatures in excess of 90°F (32.2°C). July is the warmest month with an average high of 83°F (28.3°C) and an average minimum of 62°F (16.7°C). January is the coolest month with an average high of 31°F (-0.6°C) and an average minimum of 16°F (-8.9°C). The highest temperature on record for Detroit is 104°F (40°C) recorded in June 1988 and the lowest temperature on record is -21°F (-29°C) recorded in January 1984. About 133 days each year experience temperatures below 32°F (0°C) and an average 14 days each year records temperatures below 5°F (-15°C). Every month has seen temperatures below 40°F (4.4°C) except July (extreme minimum of 41°F (5°C) recorded in July 1965) and every month except June, July, and August has recorded temperatures below freezing (0°C).

(21) The average annual precipitation for Detroit is 32.2 inches (818 mm) which is fairly evenly distributed throughout the year.

Head of Detroit River

Precipitation falls on about 201 days each year. The wettest month is June with 3.6 inches (91 mm) and the driest is February with only 1.7 inches (43 mm). An average of 32 thunderstorm days occur each year with June and July being the most likely months. Snow falls on about 82 days each year and averages about 41 inches (1041 mm) each year. January is the snowiest month averaging about 11 inches (279 mm). An eighteen inch (457 mm) snowfall in 24-hours occurred in December 1974. About eight days each year has a snowfall total greater than 1.5 inches (38 mm) and snow has fallen in every month except June through September. Fog is present on average 159 days each year and is evenly distributed throughout the year with a slight maximum during the Autumn.

(22) The prevailing wind direction in Detroit is the southwest. The winter season and transitional months of January through April are the windiest period averaging around 12 knots. Extremes often occur in squall lines or thunderstorms. A maximum gust of 82 knots occurred in June 1973. Winds along the river blow mainly out of the southwest and west, but others are common. In spring and summer, north through east winds are frequently encountered as are northwesterlies and southerlies in fall and winter.

(23) (See Page T-7, for **Detroit Climatologal table**.)

(24) **Ice.**–The lower part of the Detroit River, below Fighting Island, is generally shallow and has the same freezing characteristics as the W end of Lake Erie, forming an average thickness of 7 inches and an average maximum thickness of 11 inches. This ice generally starts to clear by mid-March because of the temperatures and the prevailing W winds. The upper part of the river is generally ice free except for shore ice and occasional drift ice. However, as a track is opened through Lake St. Clair, the broken ice will accumulate in the river above the natural ice cover in the lower part of the river. (See Winter Navigation, chapter 3.)

(25) **Navigation regulations.**–A vessel traffic reporting system and relatednavigation regulations have been established for the connecting waters from Lake Erie to Lake Huron. (See **33 CFR 162.130 through 162.140**, chapter 2, for regulations.)

(26) **Vessel Traffic Service**.–The Canadian Coast Guard operates a Vessel Traffic Service in Canadian waters from Long Point in Lake Erie through the Detroit and St. Clair Rivers to De Tour Reef Light in Lake Huron. (See chapter 3 and the Annual Edition of Canadian Notices to Mariners for complete information.)

(27) **Pilotage.**–The waters of the Detroit River are Great Lakes designated waters; registered vessels of the United States and foreign vessels are required to have in their service a United States or Canadian registered pilot. Registered pilots for the Detroit River are supplied by Lakes Pilots Association. (See appendix for address.) Pilot exchange points are 1 to 2 miles S of Port Colborne in Lake Erie, just below the Ambassador Bridge in Detroit River, and off Port Huron at the head of St. Clair River in about 43°05'30"N., 82°24'42"W. The pilot boat in the Detroit River, J. W. WESTCOTT II, has a black hull encircled by an orange band and a white cabin with the words "U.S. Mail" in black letters. Three pilot boats are at Port Huron: HU RON BELLE has an international orange hull with an aluminum cabin, and HURON MAID and HURON LADY each have an international orange hull with a white cabin. (See Pilotage, chapter 3, and **46 CFR 401,** chapter 2.)

(28) **Principal ports.**–The principal ports on the Detroit River are at Trenton, Wyandotte, and Detroit, Mich., and Windsor, Ont. Deep-draft facilities have been developed throughout the length of the river.

(29) **Charts 14830, 14848, 14853, 14854.**–The **Detroit River** flows S from Lake St. Clair and empties into the NW end of Lake Erie.

(30) **Detroit River Light** (42°00.0'N., 83°08.5'W.), 55 feet above the water, is shown from a white conical tower, upper part black, on a hexagonal pier in 20 feet of water at the mouth of the Detroit River at the junction of East and West Outer Channels. A racon, fog signal, and radiobeacon are at the light.

(31) **Channels.–East Outer Channel** and **West Outer Channel**, dredged and well marked, lead northward through the shallows at the upper end of Lake Erie to the mouth of the Detroit River. Immediately N of Detroit River Light, the channels merge to form lower Livingstone Channel. In June 1999, East Outer Channel had a controlling depth of 24 feet (28 feet at midchannel). In 1987, West Outer Channel had a controlling depth of 16 feet for a midwidth of 700 feet.

(32) East Outer Channel is a two-way passage. West Outer Channel may be used by downbound vessels whose drafts permit. (See **33 CFR 162.130, through 162.140,** chapter 2, for regulations.) East Outer Channel Light 1E is equipped with a racon and a fog signal.

(33) From Detroit River Light, lower Livingstone Channel provides for two-way traffic to the lower junction of Amherstburg Channel and upper Livingstone Channel, 1.5 miles SW of Bar Point, the E entrance point to the river. A Federal project provides for a depth of 29.0 feet in lower Livingstone Channel. (See Notice to Mariners and latest edition of charts for controlling depths.)

(34) An unmarked temporary **dumping ground** is in the approach to the Detroit River between East and West Outer Channels.

(35) **Small-craft facilities.**–Numerous marinas on the Detroit River and adjacent waters provide gasoline, diesel fuel, water, ice, electricity, marine supplies, sewage pump-out, railway and hoists to 250 tons and 150 feet. A launching facility for craft to 34 feet is on the waterway N of Belle Isle.

(36) **Charts 14830, 14848, 14846.–Huron River** empties into the NW end of Lake Erie through the marshes on the W side of the mouth of the Detroit River. Depths are about 2 feet over the bar, thence 5 to 10 feet in the lower part of the river. A fixed highway bridge with a clearance of 11 feet crosses the river about 1.8 miles above the mouth. An overhead power cable on the W side of the bridge has a clearance of 38 feet. A **slow-no wake speed** is enforced on the Huron River. A marina on the S side of the river below the highway bridge provides gasoline, water, electricity, sewage pump-out, a launching ramp, and a 6-ton crane.

(37) **Charts 14848, 14853.**–In the lower part of the Detroit River, from SW of Bar Point N for about 7 miles, the dredged channel divides into upbound and downbound channels. The upbound channel E of Bois Blanc Island comprises Amherstburg Channel and the lower mile of Ballards Reef Channel. The downbound channel is Livingstone Channel, W of Bois Blanc Island.

(38) **Amherstburg Channel** comprises three reaches. **Hackett Reach** extends about 3.7 miles NE from the junction with Livingstone Channel to the lower end of Bois Blanc Island,

thence **Amherstburg Reach** extends about 1 mile to the upper end of Bois Blanc Island, and thence **Limekiln Crossing Reach** extends about 1.2 miles to the junction with Ballards Reef Channel.

(39) The channel through each of the reaches is 600 feet wide. The W half of the channel is the deep-draft channel and is separated from the E or light-draft channel by lighted buoys. A Federal project provides for a depth of 28.5 feet in the W half of Hackett Reach and 27.5 feet in the W half of Amherstburg and Limekiln Crossing Reaches with 21 feet in the E half through the entire channel. (See Notice to Mariners and latest edition of charts for controlling depths.)

(40) The channels are well marked by lights and lighted and unlighted buoys. The deep-draft channel is marked by a lighted range in each reach.

(41) Because of current effects, mariners are advised to exercise caution when turning from Hackett Reach into Amherstburg Reach.

(42) **Anchorage.**–Care should be exercised when anchoring in Amherstburg Channel between its upper end and the S end of Bois Blanc Island. The current in this area may cause the anchor to drag and overturn rocks, which may then become obstructions. Dragging can probably be lessened or entirely avoided by paying out sufficient length of chain before strain is brought to bear on the anchor.

(43) Canadian regulations specify a **speed limit** of 8 knots for vessels of 15 gross tons and over in Amherstburg Channel.

(44) The upper part of **Livingstone Channel,** passing E of the lower half of Grosse Ile and W of Bois Blanc Island, is about 6.7 miles long from its N entrance at Ballards Reef Channel to its S junction with Amherstburg Channel 1.5 miles SW of Bar Point. This section of Livingstone Channel is for downbound vessels except that traffic becomes two-way under certain winter conditions designated by the Commander, Ninth Coast Guard District. (See **33 CFR 162.130, through 162.140,** chapter 2, for regulations.) Most of the channel is revetted on both sides with rock excavated from the channel. Most of the revetment is low and wooded.

(45) The channel is well marked with lights and buoys. **Ballards Reef Channel Light 77D** (42°08.5'N., 83° 07.5'W.) marks the W side of the downbound turn into the entrance to Livingstone Channel at its junction with Ballards Reef Channel. Because of the strong E set of the current at the junction of Livingstone and Ballards Reef Channels, mariners are advised to favor the W side, if draft permits.

(46) N from its junction with Amherstburg Channel to the junction with Ballards Reef Channel, a Federal project provides for a depth of 29.0 feet in the lower part and 27.7 feet in the upper part of Livingstone Channel. (See Notice to Mariners and latest edition of charts for controlling depths.)

(47) Canadian regulations specify a **speed limit** of 10 knots in Livingstone Channel for vessels of 500 gross tons and over.

(48) Various forms of submerged and exposed compensating dikes extend to the W from the W channel revetment, connecting with Stony Island in the N part and extending to within about 400 feet of Sugar Island at the midpoint of the channel.

(49) **Bois Blanc Island, Ont.,** popularly known as Bob-Lo Island, is in the lower part of the Detroit River, close to the Canadian mainland and separated from it by Amherstburg Channel. The island is a large amusement park. A marina on the W side of the island has water and electricity. Ferries connect the island with Amherstburg, Ont., and Detroit, Mich.

(50) **Caution.**–Numerous small craft have reported striking two submerged obstructions between the W side of Bois Blanc Island and the Livingstone Channel revetment; caution is advised.

(51) **Amherstburg, Ont.,** is a town on the E side of the Detroit River, opposite Bois Blanc Island.

(52) The following is extracted from **Canadian Sailing Directions CEN304, First Edition.**

(53) *The limits of Amherstburg Harbour are defined as all of the waters of the Detroit River and of Lake Erie on the Canadian side of the International Boundary south of the southerly limit of Windsor Harbour and west of the meridian of longitude 83°05'00"W. The southerly limit of Windsor Harbour is a straight line drawn from Fighting Island North light at the International Boundary (42°14'N., 83°08'W.) in a* ***046.5°*** *direction to the high water mark on the shore.*

(54) *Amherstburg is a Public Harbour administered by Transport Canada. For harbour regulations see Sailing Directions booklet CEN 300, General Information, Great Lakes.*

(55) *The town of Amherstburg, with a population of 8,921 (1991), is a tourist resort with much historic appeal, having been a major battleground in the War of 1812 and also the northern end of the Underground Railroad for escaping slaves. There are also chemical, distillation and manufacturing plants in the area.*

(56) *The Canadian Coast Guard Base lies between the Hackett Reach range lights. The south wharf has a buoy maintenance and storage building; the wharf is 250 feet (76.2 m) long and had a depth of 21 feet (6.4 m) in 1994. A protected basin formed by the northern part of the south wharf had a depth of 3 feet (0.9 m) in 1994. The north wharf, 290 feet (88.4 m) long, has workshops and office buildings. In an emergency, temporary berthing at the Canadian Coast Guard Base may be arranged with the Sub-District Manager.*

(57) *Amherstburg is a* ***Customs vessel reporting station*** *for pleasure craft.*

(58) *The Allied Chemical wharf, at the upper end of Amherstburg, is a series of dolphins connected by catwalks. The wharf is 300 feet (91.4 m) long with a depth of 21 feet (6.4 m) in 1994.*

(59) *A Canadian Coast Guard Rescue Cutter is based at Amherstburg from the beginning of April to mid-December each year, though these dates are subject to change (see information on Search and Rescue in Sailing Directions booklet CEN 300, General Information, Great Lakes).*

(60) ***Caution.****–Extra care is necessary when anchoring in Amherstburg Channel between its upper end and the south end of Bois Blanc Island; the current may cause an anchor to drag and overturn rocks which then become obstructions.*

(61) *A submerged water intake north of the front structure of the Fort Malden range extends 300 feet (91.4 m) into the river.*

(62) ***Caution.****–Small craft operators have reported striking two submerged obstructions between the west side of Bois Blanc Island and the Livingstone Channel dyke.*

(63) *There are several small wharves and marinas in the area of Amherstburg Channel.*

(64) *Riverside Marina, 1 mile north of Bar Point, had depths of 2 feet (0.6 m) in 1994 and offered dockage with power outlets, picnic area, pay phone, groceries, bait, tackle, ice, gasoline and diesel fuel.*

(65) *Duffys Motor Inn & Marina, 0.2 mile north of the Coast Guard base, had depths of 1 to 10 feet (0.3 to 3 m) in 1994 and offered dockage with power and water, municipal ramp, motel accommodation (with pool), pay phone, snack bar, restaurant and licensed dining room, ice and gasoline. The facilities and attractions of Amherstburg are all near by.*

(66) *Duffs Marina, 1 mile farther north, had depths of 1 to 2 feet (0.3 to 0.6 m) in 1994 and offered dockage, fishing boat rentals, pay phone, drinking water, some groceries, bait, tackle, snack bar, restaurant, ice and gasoline.*

(67) Four radio masts N of Amherstburg in about 42°08.8'N., 83°05.5'W. are prominent. They are reported to be visible from Point Pelee in Lake Erie to Lake St. Clair.

(68) The lower part of the Detroit River W of Livingstone Channel is open and generally shallow with several small islands. Natural channels with depths of about 13 feet and less, marked by buoys, provide access for small craft.

(69) W of the lower end of the revetments in Livingstone Channel, a small-craft channel marked by buoys leads from the open part of the lower Detroit River between **Sugar Island** and **Meso Island,** along the Grosse Ile shore, and thence W of **Stony Island.** In the narrow part of this channel between Stony Island and Grosse Ile, a line of submerged bridge abutments, with least depths of ½ foot, crosses the channel, and submerged cables follow the same path just to the S and N of the abutments. A buoy marks the W side of the westernmost abutment, and in 1977, the best water was inside the buoy within 150 to 200 feet of the Grosse Ile shore. The W abutment is about 280 feet from shore.

(70) A natural channel marked by buoys leads from open water in the lower part of the Detroit River along the E side of **Celeron Island** and connects with Trenton Channel at Gibraltar. The least depth in this channel is about 8 feet.

(71) **Sugar Island Cut,** about 400 feet wide, is an opening between the E side of Sugar Island and a compensating revetment that extends W from the W revetted wall of Livingstone Channel.

(72) **Hole-in-the-Wall,** W of the N end of Bois Blanc Island, is a 0.2-mile-wide gap in the revetted walls of Livingstone Channel that allows small craft to cross the main channel to the Canadian side of the Detroit River. A strong SW current flows through Hole-in-the-Wall; caution is advised.

(73) Protective riprap extends out 30 feet from the base of the light marking the N end of the W revetment on the S side of Hole-in-the-Wall. The structure should not be passed close aboard, even by vessels of shallow draft.

(74) **Ballards Reef Channel** is about 3.5 miles long from its lower end junction with Amherstburg Channel to its upper end junction with Fighting Island Channel. Upper Livingstone Channel joins Ballards Reef Channel about 1 mile above the latter's lower end. Below its junction with Livingstone Channel, Ballards Reef Channel is normally used for upbound traffic, and above the junction it is used for upbound and downbound traffic.

(75) Ballards Reef Channel is well marked by lights, lighted and unlighted buoys, and by a lighted range at each end. A Federal project provides for a depth of 28.5 feet above the junction with Livingstone Channel and 27.5 feet below the junction with Livingstone Channel. (See Notice to Mariners and latest edition of charts for controlling depths.)

(76) An auxiliary channel for light-draft vessels adjoins the E side of Ballards Reef Channel. It is marked by buoys and has depths of about 14 feet.

(77) **Fighting Island Channel** extends from the upper end of Ballards Reef Channel, about 2 miles below the head of Grosse Ile, along the W side of Fighting Island to the natural deep water N of Fighting Island. A Federal project provides for a depth of 28.5 feet in Fighting Island Channel. (See Notice to Mariners and latest edition of charts for controlling depths.)

(78) **Anchorage.**–A deep-draft anchorage, marked on the W side by buoys, is on the W side of the S end of Fighting Island Channel. The anchorage is used when conditions are unfavorable for proceeding through the confined deep channels leading S into Lake Erie. Vessels using this anchorage should be careful to avoid the long shoal extending 0.6 mile S from Mamajuda Island. A buoy marks the S end of the shoal.

(79) A buoyed natural channel leads N from the NW part of the anchorage between the upper end of Grosse Ile and **Mamajuda Island Shoal** and joins with Trenton Channel at Wyandotte, Mich. The controlling depth in the channel is about 21 feet.

(80) **Fighting Island, Ont.,** on the E side of Fighting Island Channel off the Ontario mainland, is about 4 miles long and about 0.5 mile wide. The entire island is either marsh or waste bed fill from various concerns that pump manufacturing residue to the island as waste. Low bluffs are on the W side of the island. A shoal, with a depth of 18 feet at its outer end marked by a lighted buoy, extends 0.5 mile N from the upper end of the island.

(81) From about the midpoint of Ballards Reef Channel, a natural deep channel leads N between Fighting Island and the Canadian mainland. The channel is divided by **Turkey Island, Grassy Island,** and several shoals, but near the upper end, the channels rejoin before merging with the main channel of the Detroit River at the N end of Fighting Island. The channel is marked by buoys; see the latest edition of the chart for general depths. **La Salle, Ont.,** on the E side of the channel at the N end, has several small-craft facilities.

(82) **Grosse Ile, MI,** about 8 statute miles (7 nm) long and 1.5 statute miles (1.3 nm) wide, is the largest island in the Detroit River. It extends along the W side of the dredged river channels from about the midpoint of upper Livingstone Channel N to about the midpoint of Fighting Island Channel opposite the city of Wyandotte, Mich. Trenton Channel separates the W side of the island from the mainland. The N end of the island, **Point Hennepin,** is a waste disposal site; the rest of the island consists mostly of residential communities and private facilities.

(83) **Thorofare Canal,** a large shallow drainage ditch about 3.5 miles long, crosses the body of Grosse Ile in a NE-SW direction. Several highway bridges and overhead cables cross this ditch. Passage should not be attempted without local knowledge.

(84) A **slow-no wake speed** is enforced within 1,000 feet of shore of Grosse Ile, except in Trenton Channel and in the channel between the NE side of the island and Mamajuda Island Shoal. A **slow-no wake speed** is enforced in Thorofare Canal and in the canals between Grosse Ile and the small islands off its S end.

(85) **Charts 14848, 14854, 14853.–Ecorse Channel,** is a buoyed, natural deepwater channel that follows the curve of the Michigan shoreline from the junction of Fighting Island Channel and Trenton Channel SW for about 1.2 miles to its lower junction with Trenton Channel. Between the upper and lower junctions, Ecorse Channel is separated from Trenton Channel by **Mud Island, MI** and the shoals that extend NE and SW from it. Ecorse Channel has a controlling depth of about 13 feet at its NE end,

with deeper water in the lower part. **Ecorse, Mich.,** is on the W side of the channel at the mouth of the **Ecorse River.**

(86) A **slow-no wake speed** is enforced within 1,000 feet of shore in the waters of the Detroit River adjacent to the city of Ecorse.

(87) **Trenton Channel** extends from the N end of Fighting Island Channel SW to the Michigan shore, thence S along the shore for about 6 miles to a turning basin at the upper end of the city of Trenton, thence 3 miles to another turning basin at the lower end of the city. The dredged channel, marked by buoys, is separated from the main part of the Detroit River by Grassy Island and Grosse Ile.

(88) In November 1994, the controlling depths were 26 feet (7.9 m) at midchannel from the junction with Fighting Island Channel to and in the turning basin N of Trenton, thence 20 feet (6.1 m) at midchannel to the turning basin S of Trenton with 19 feet (5.8 m) in the basin.

(89) From the lower end of the Trenton Channel lower turning basin, a depth of about 6 feet can be carried through the narrow, crooked natural channels between Grosse Ile and the mainland to the town of Gibraltar and the open river below Grosse Ile.

(90) The Grosse Ile Toll highway bridge, a swing span with a clearance of 10 feet, crosses Trenton Channel 2.2 miles below Point Hennepin. The Grosse Ile Parkway bridge, crossing Trenton Channel just above the lower turning basin, has a swing span with a clearance of 18 feet. (See **33 CFR 117.1 through 117.59 and 117.631,** chapter 2, for drawbridge regulations.)

(91) **Wyandotte, Mich.,** fronts Trenton Channel for about 3 miles opposite Point Hennepin. The city is an important industrial center, and numerous stacks in the city are prominent from the river.

(92) A **slow-no wake speed** is enforced within 1,000 feet of shore in the waters of the Detroit River adjacent to the city of Wyandotte.

(93) **Towage.**–Tugs for Wyandotte are available from Detroit. (See Towage under Detroit.)

(94) **Wharves.**–Wyandotte has several facilities fronting on Trenton Channel. Only the deep-draft facilities are described. (For a complete description of the port facilities, refer to Port Series No. 45, published and sold by the U.S. Army Corps of Engineers. See appendix for address.) The alongside depths given are reported depths. (For information on the latest depths, contact the operators.)

(95) **City of Wyandotte, Power Plant Wharf:** 0.5 mile N of Point Hennepin; 630 feet of berthing space; 18 to 23 feet alongside; deck height, 8 feet; open storage for 60,000 tons of coal; receipt of coal; owned and operated by City of Wyandotte.

(96) **Small-craft facilities.**–Several marinas in the N part of the city provide transient berths, gasoline, diesel fuel, water, ice, electricity, sewage pump-out, launching ramps, and marine supplies. Lifts to 45 tons are available for hull, engine, and radio equipment repairs.

(97) **Trenton, Mich.,** just S of Wyandotte, fronts Trenton Channel opposite Grosse Ile for about 4 miles. The stacks of the Detroit Edison Co., 0.5 mile SW of the Grosse Ile Parkway bridge, are prominent from the river, especially from the S.

(98) **Towage.**–Tugs for Trenton are available from Detroit. (See Towage under Detroit.)

(99) **Quarantine, customs, immigration, and agricultural quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(100) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(101) A **slow-no wake speed** is enforced within 1,000 feet of shore within the limits of Trenton.

(102) **Wharves.**–Trenton has three deep-draft facilities. (For a complete description of the port facilities, refer to Port Series No. 45, published and sold by the U.S. Army Corps of Engineers. See appendix for address.) The alongside depths given are reported depths. (For information on the latest depths, contact the operators.)

(103) **McLouth Steel Products Corp., Ore Dock:** (42°09'33"N., 83°09'59"W.); 1,600-foot face; 28 feet alongside; deck height, 7 feet; three 12-ton, traveling bridge cranes, operating rate of 1,200 tons per hour; open storage for over 2 million tons of iron ore, iron ore pellets, and limestone; receipt of iron ore, iron ore pellets, and limestone; owned and operated by McLouth Steel Products Corp.

(104) **Mobil Oil Corp. Wharf:** (42°08'15"N., 83°10'33"W.); 225 feet of berthing space with dolphins; 17 feet along side; deck height, 5 feet; loading platform, 9 feet; pipelines extend to storage tanks, capacity over 1¼ million barrels; occasional receipt and shipment of fuel oil and gasoline; owned and operated by Mobil Oil Corp.

(105) **Detroit Edison Co., Trenton Channel Power Plant Wharf:** W side of Trenton Channel lower turning basin; 960-foot face; 21 to 23 feet along side; deck height, 9 feet; open storage for 732,000 tons of coal; receipt of coal; owned and operated by Detroit Edison Co.

(106) **Small-craft facilities.**–Two marinas at Trenton provide gasoline, diesel fuel, water, ice, electricity, marine supplies, a 10-ton hoist, and launching ramps.

(107) **Charts 14848, 14853.–Gibraltar, Mich.** is a town on the Michigan mainland opposite the S end of Grosse Ile, about 2 miles below the Trenton Channel lower turning basin. Private lights and a private **239°** lighted range mark the entrance channel to Gibraltar from the Detroit River. The range should be followed closely because of rocks along the S side of the channel. A **slow-no wake speed** is enforced within 500 feet of shore within the limits of Gibraltar. Marinas inside the entrance channel provide gasoline, diesel fuel, water, ice, electricity, sewage pump-out, marine supplies, and launching ramps. Hoists to 30 tons are available for hull and engine repairs.

(108) **Lake Erie Metropark Marina,** developed by the Michigan State Waterways Commission, about 3 miles S of Gibraltar, provides transient berths with electricity, water, and sewage pump-out for boats no greater than 30 feet. The entrance is marked by private lighted and unlighted buoys and a **270°** lighted range.

(109) Above Fighting Island, for about 9 miles to Belle Isle, the Detroit River narrows into a single channel from 0.35 to 0.5 mile wide. In this stretch the river is generally clear, with depths of 29 to 43 feet at midriver. Buoys mark the principal shoals that extend off the banks of the river.

(110) The most prominent feature on the Detroit River is the Renaissance Center (42°19'44"N., 83°02'24"W.). The flashing light atop the building is reported to be visible for more than 20 miles.

(111) **Anchorage.**–An anchorage designated by the Canadian Government is 1 mile above the N end of Fighting Island. The anchorage, 800 feet by 4,000 feet with depths of 31 to 36 feet, is

marked by a lighted buoy at the SE corner and a light at the NE corner.

(112) A shoal, with rocks that bare, extends 400 feet off the W side of the river about 1.3 miles N of Fighting Island. Lighted buoys mark the outer edge of the shoal.

(113) **Wharves.**–There are several deep-draft facilities along the W side of the river between the N end of Fighting Island and the mouth of the River Rouge, 2 miles upstream. (For a complete description of the facilities, refer to Port Series No. 45, published and sold by the U.S. Army Corps of Engineers. See appendix for address.) The alongside depths given are reported depths. (For information on the latest depths, contact the operators.)

(114) **Nicholson Terminal and Dock Co., Ecorse Pier:** (42°15'23"N., 83°07'12"W.); 1,820 feet of berthing space NE side, 25 to 28 feet alongside; 486-foot face, 36 feet alongside; 1,230 feet of berthing space SW side, 8 to 16 feet alongside; deck height, 7 to 9 feet; two 70-ton and two 12-ton, traveling, gantry cranes; two 200-ton, crawler cranes; four sheds providing 80,000 square feet covered storage; 8 acres open storage; receipt and shipment of conventional and containerized general cargo, steel, coal, scrap metal, and tallow; owned and operated by Nicholson Terminal and Dock Co.

(115) **User Oil Co., Riverfront Terminal Wharf:** 42°15'39"N., 83°07'11"W.); 300 feet of berthing space; 24 feet alongside; deck height, 11 feet; storage tanks, capacity 835,000 barrels; receipt and shipment of petroleum products; owned by National Steel Corp., Great Lakes Division and operated by Usher Oil Co.

(116) **Repairs.**–Nicholson Terminal and Dock Co. operates a floating drydock at the inner end of their pier. The 2,500-ton drydock is 170 feet long with a width of 50 to 55 feet and a depth of 13 feet over the keel blocks. Portable equipment is available for making general repairs to vessels at berth anywhere in the harbor.

(117) **Charts 14848, 14853, 14854.–River Rouge** discharges into the Detroit River at the S end of the city of Detroit, about 2 miles above Fighting Island. A Federal project has improved River Rouge as far as a turning basin about 2.5 miles above the entrance.

(118) **Short Cut Canal** is the section at the entrance to River Rouge from Detroit River to the junction with **Old Channel**. The canal avoids the large bend in the old river channel (Old Channel) at the lower part of River Rouge, and shortens the distance to facilities upstream by more than 1 mile. The connection between Short Cut Canal and Old Channel has created **Zug Island,** which is occupied by large industrial corporations.

(119) The Federal Project provides for a depth of 25 feet in Short Cut Canal and River Rouge to about 300 feet below the West Jefferson Ave. Bridge, thence 21 feet to the turning basin at the head of the project, with 21 feet in the basin. Old Channel has a project depth of 25 feet from the entrance to just below the first basculebridge, thence 18 feet to about 0.5 mile above the mouth, thence 17 feet to the railroad swing bridge, thence 21 feet to the junction with Short Cut Canal. (See Notice to Mariners and latest editions of charts for controlling depths.) The N side of the entrance to Short Cut Canal is marked by a lighted buoy. Rapid shoaling occurs in the canal and river because of the soft bottom. A number of cables, water mains, and tunnels cross under the canal and river; masters should exercise caution when dropping anchors.

(120) **Regulations.**–A **speed limit** of 4 mph is enforced in River Rouge and Short Cut Canal. (See **33 CFR 162.130 through 162.140,** chapter 2, for navigation regulations.)

(121) **Wharves.**–Both sides of River Rouge and Short Cut Canal are lined by industrial corporations and their deep-draft facilities. (For a complete description of facilities in the River Rouge, refer to Port Series No. 45, published and sold by the U.S. Army Corps of Engineers. See appendix for address.) The alongside depths given are reported depths. (For information on the latest depths, contact the operator.) Many of the facilities have railway, water, and electrical shore-power connections.

(122) **Facilities along the S side of Short Cut Canal and River Rouge:**

(123) **Michigan Marine Terminal Wharf:** at the junction of Short Cut Canal and Old Channel; 700-foot face; 22 feet alongside; deck height, 7 feet; pipelines extend to tank storage, capacity 8 million barrels; receipt and shipment of asphalt, coal tar, and petroleum products; owned and operated by Michigan Marine Terminal.

(124) **Amoco Oil Co., River Rouge Terminal Wharf:** about 0.2 mile above Michigan Marine Terminal Wharf; 1,000-foot face; 20 feet alongside; deck height, 7½ feet; pipelines extend to tank storage, capacity 833,000 barrels; receipt and shipment of petroleum products; owned and operated by Amoco Oil Co.

(125) **Marblehead Lime Co., River Rouge Wharf:** 800 feet below West Jefferson Avenue bridge; 1,280 feet of berthing space; 25 feet alongside; deck height, 4 feet; open storage for 400,000 tons of limestone and 28,000 tons of coal; receipt of limestone and coal; owned and operated by Marblehead Lime Co., Division of Calcitherm Nederland N.V.

(126) **United States Gypsum Co. Dock:** 800 feet above West Jefferson Avenue bridge; 405-foot face plus 500 feet along natural bank; 21 feet alongside dock; deck height, 6 feet; open storage for 85,000 tons of gypsum; storage silos, capacity 90,000 tons; receipt of gypsum; owned and operated by United States Gypsum Co.

(127) **Detroit Bulk Dock:** 400 feet below ConRail bridge; 730-foot face with dolphins, along natural bank; 17 to 20 feet alongside; deck height, 4 feet; 11 acres of open storage; receipt of miscellaneous dry bulk commodities, including limestone, salt, and sand; owned by Dale Osborne and operated by Detroit Bulk Dock, Inc.

(128) **Specialty Minerals, Rouge River Dock:** 700 feet above ConRail bridge; 654 feet of berthing space along natural bank; 17 to 20 feet alongside; bank height, 2 to 6 feet; open storage for 100,000 tons of limestone; receipt of limestone; owned by Specialty Minerals Inc. and operated by Detroit Bulk Dock Inc.

(129) **Trumbull Asphalt Co., Detroit Plant Wharf:** 700 feet above Fisher Freeway bridge; 500 feet of berthing space with bulkhead; 20 feet alongside; deck height, 6 feet; tank storage with capacity of 131,000 barrels; receipt of asphalt; owned and operated by Trumbull Asphalt Co., a division of Owens-Corning Fiberglas Corp.

(130) **Marathon Petroleum Co., River Rouge Terminal Wharf:** 500 feet below Fort Street bridge; 415-foot face with bulkhead; 20 to 23 feet alongside; deck height, 6 feet, bulkhead, 5 feet; pipelines extend to storage tanks, capacity 900,000 barrels; shipment of asphalt; owned and operated by Marathon Petroleum Co., a subsidiary of USX Corp.

(131) **Marathon Petroleum Co., Fordson Island Terminal Wharf:** NE side of Fordson Island 1,200 feet below Dix Avenue

Structures across River Rouge
**Miles above the mouth of the river*
***Clear width in feet proceeding upstream*

No.	Location and Name	Kind	Miles*	Clear width in feet of draw or span openings**			Clear height in feet above Low Water Datum	Remarks
				Right	Left	Center		
	Short Cut Canal and River							
1	Overhead cable	Power	0.32				191	
2	Overhead cable	Power	0.37				191	
3	Overhead pipeline	Gas	0.39				153	
4	National Steel Corp. bridge	Railroad	0.40			125	6	Bascule. KUZ-371. Notes 1 and 2.
5	Overhead pipeline	Gas	0.41			240	123	
6	Overhead cable		0.45				174	
	Junction of Short Cut Canal and Old Channel		0.53					
7	West Jefferson Ave. bridge	Highway	1.10			125	9	Bascule. Note 1.
8	ConRail bridge	Railroad	1.48			123	8	Bascule. Notes 1 and 2.
9	Fisher Freeway I–75 bridge	Highway	1.85			230	100	Fixed.
10	Norfolk Southern RR bridge	Railroad	1.87			125	8	Bascule. Note 1.
11	Overhead pipeline		1.90			300	103	
12	Fort St. bridge	Highway	2.20			118	9	Bascule. Note 1.
13	Dix Ave. bridge	Highway	2.73			125	8	Bascule. Note 1.
14	Overhead cables	Power	2.75				130	
	Old Channel via the mouth							
15	Overhead pipeline	Gas	0.26				153	
16	Delray Connecting RR bridge	Railroad	0.30			120	7	Bascule. Note 1.
17	Delray Connecting RR bridge	Railroad	0.34			120	7	Bascule Note 1.
18	Overhead cable		0.77				188	
19	Delray Connecting RR bridge	Railroad	0.80	102			7	Swing. Turntable on right side. Note 1.
20	Overhead cable		0.82				188	
	Junction of Old Channel and Short Cut Canal		1.55					

Note 1.–See **33 CFR 117.1 through 33 CFR 117.59,** chapter 2, for drawbridge regulations.

Note 2.–The bridgetender monitors VHF-FM channel 16 (156.80 MHz) and works on channel 12 (156.60 MHz).

bridge; offshore wharf, 350-foot face; 20 to 21 feet alongside; deck height, 6 feet, bulkhead, 5 feet; pipelines extend from storage tanks to wharf, capacity over 1¾ million barrels; pipelines extend to 3 bal last stor age tanks, ca pac ity 901,320 gal lons; shipments of petroleum products; owned and operated by Marathon Petroleum Co., a subsidiary of USX Corp.

(132) **Detroit Lime Co. Wharf:** 200 feet below Dix Avenue bridge; 800 feet of berth ing space; 21 feet along side; deck height, 9 feet; open storage for 350,000 tons of limestone; storage silos for 8,700 tons of lime; re ceipt of lime stone and oc ca sional re ceipt of coal; owned and operated by Detroit Lime Co.

(133) **Fa cil ities on the N side of River Rouge above Short Cut Canal:**

(134) **Jefferson Marine Terminal, Jefferson Avenue Bridge Dock:** immediately above West Jefferson Avenue bridge; 735 feet of berth ing space along nat u ral bank; 21 feet along side; bank height, 6 feet; open stor age for 25,000 tons of lime stone; re ceipt of limestone; owned by Angelo Baiardi and John Diangelo and operated by Jefferson Marine Terminal, Division of Edward C. Levy Co.

(135) **Detroit Bulk Storage, Rouge River Dock:** 500 feet above West Jefferson Avenue bridge; 735 feet of berthing space along natural bank; 15 feet alongside; bank height, 6 feet; open stor age for 50,000 tons of lime stone; re ceipt of lime stone; owned by Angelo Baiardi and John Diangelo and operated by Detroit Bulk Storage.

(136) **Marblehead Lime Co., De troit Wharf:** 1,400 feet above West Jefferson Avenue bridge; 900 feet of berthing space; 19 to 21 feet along side; deck height, 8 feet; open storage for 110,000 tons of material; receipt of limestone; owned by Marblehead Lime Co. and operated by Edward C. Levy Co.

(137) **St. Marys Cement Co., De troit Plant Wharf:** 900 feet be low Fisher Free way bridge; 450-foot face and 250 feet along natural bank; 19 to 21 feet alongside; deck height, 11-foot pier, 15-foot wharf; open storage for 200,000 tons of limestone, slag, and gypsum rock; 120,000 square feet covered storage for

clinker; open storage are at rear for 55,000 tons of coal or gypsum rock; storage silos for 60,000 tons of cement; receipt of limestone, gypsum rock, slag, cement clinker, and coal; owned and operated by St. Marys Cement Co.

(138) **Harridon Terminal Inc.:** 600 feet above Fisher Freeway bridge; 792-foot face; 21 feet reported along side; deck height, 11 feet; 15 acres of open storage; receipt limestone and shipment of scrap metal; owned and operated by Harridon Terminal, Inc.

(139) **Morton Salt Co., Detroit Wharf:** 1,100 feet above Fisher Freeway bridge; 700 feet of berthing space along natural bank; 12 feet alongside; deck height, 7 feet; one 85-ton crawler crane; silo storage for 8,000 tons of salt; open storage for 63,000 tons of salt; receipt of bulk salt; owned and operated by Morton International Inc., Morton Salt Group.

(140) **Rouge Steel Co., East Dock:** E side of the slip on the NW side of the turning basin; 2,514-foot face; 17 to 22 feet alongside; deck height, 6 feet; two traveling bridge cranes and one stationary bridge crane; storage trough for 152,000 tons of material; open storage for 437,000 tons of coal, 308,000 tons of limestone, and 800,000 tons of iron ore and pellets; receipt of iron ore, iron ore pellets, coal, and limestone; owned and operated by Rouge Steel Co.

(141) **Rouge Steel Co., West Wharf:** W side of the slip on the NW side of the turning basin; 2,915-foot face; 6 to 21 feet alongside; deck height, 6 feet; open storage for 11,000 tons of limestone; receipt of limestone; owned and operated by Rouge Steel Co.

(142) **Facilities on the mainland side of Old Channel:**

(143) **AlliedSignal Inc., Detroit Tar Plant, Coal Tar Wharf:** 0.3 mile above mouth of river; 275 feet of berthing space with shore moorings; 22 feet alongside; deck height, 5 feet; pipeline to storage tanks, capacity over 3¼ million gallons; receipt and shipment of coal tar, shipment of creosote; owned and operated by AlliedSignal Inc.

(144) **AlliedSignal Inc., Detroit Tar Plant, Pitch Wharf:** 0.4 mile above mouth of river; 250 feet of berthing space with dolphins; 22 feet alongside; deck height, 8 feet; open storage for 18,000 tons of bulk pitch; occasional shipment of bulk pitch; owned and operated by AlliedSignal Inc.

(145) **Jefferson Marine Terminal, Old Channel Wharf:** 1.1 miles above mouth of river; 1,257 feet of berthing space; 10 to 21 feet alongside; deck height, 5 feet; one unloading tower; pipelines extend to silos, capacity 26,000 tons of cement; open storage for 77,000 tons of limestone; receipt of limestone and sand; occasional receipt of slag, cement, and fly ash; owned and operated by Jefferson Marine Terminal, Division of Edward C. Levy Co.

(146) **Facilities on Zug Island:**

(147) All the facilities on Zug Island are owned and operated by National Steel Corp., Great Lakes Division.

(148) **National Steel Corp., Great Lakes Division, Zug Island Ore Dock No. 1 Rouge River Wharf:** N side of the island at the mouth of Old Channel; 1,287-foot face; 21 feet alongside; deck height, 8 feet; one traveling bridge crane; open storage for 250,000 tons of iron-ore pellets; receipt of iron-ore pellets, scrap metal, slag, and limestone.

(149) **National Steel Corp., Great Lakes Division, Zug Island Area B Dock:** NW side of the island 0.6 mile below junction with Short Cut Canal; 1,000 feet of berthing space along natural bank; 17 feet along side; bank height, 8 feet; open storage for 60,000 tons of coal; receipt of coal.

(150) **National Steel Corp., Great Lakes Division, Zug Island Short Cut Canal Dock:** S side of the island at the mouth of Short Cut Canal; 1,300 feet of berthing space along natural bank; 21 feet alongside; bank height, 8 feet; open storage for 900,000 tons of coal; receipt of coal.

(151) **National Steel Corp., Great Lakes Division, Zug Island Stone Dock:** E side of the island of the Detroit River 1,000 feet N of the mouth of Short Cut Canal; 1,000-foot face; 27 feet alongside; deck height, 8 feet; open storage for 520,000 tons of limestone and 500,000 tons of iron-ore pellets; receipt of limestone and iron ore pellets.

(152) **National Steel Corp., Great Lakes Division, Zug Island Ore Dock No. 3 Wharf:** E side of the island immediately N of the Stone Dock; 1,349-foot face; 27 feet alongside; deck height, 10 feet; four 15-ton traveling bridge cranes; open storage for 800,000 tons of iron-ore pellets; receipt of iron-ore pellets.

(153) **National Steel Corp., Great Lakes Division, Zug Island Ore Dock No. 1, Detroit River face, and Dock No. 1 Wharf:** E side of the island immediately N of Ore Dock No. 3; two 100-foot face; 25 to 27 feet alongside; deck height, 10 feet; pipeline to storage tanks, capacity 2 million gallons of coal tar; shipment of coal tar, coke, coke breeze, mill scale, and iron-ore pellet fines; operated by National Steel Corp., Great Lakes Division and Hickman, William & Co.

(154) **Supplies.**–Bunker fuel is available at several facilities in the river, or by barge or truck. A supply company on the W side of Old Channel has supplies and provisions.

(155) **Charts 14848, 14853.**–About 0.5 mile above the mouth of Old Channel, overhead power cables with a minimum clearance of 165 feet across the Detroit River between Detroit and Windsor, Ont.

(156) The **Ambassador Bridge** crosses the Detroit River 2.2 miles above the mouth of Old Channel. The suspension span has a clearance of 156 feet for 100 feet at the center, decreasing to 133 feet at each side of the river.

(157) A shoal, marked at its outer edge by a lighted buoy, extends off the Canadian side of the river for about 0.5 mile above the Ambassador Bridge.

(158) Two tunnels cross under the Detroit River above the Ambassador Bridge. The ConRail Tunnel, 0.9 mile above the bridge, was covered by a depth of 31 feet at midchannel in 1959, with depths of 24 and 34 feet, 300 feet from the United States shoreline and 350 feet from the Canadian shoreline, respectively. The Detroit-Windsor Tunnel, a highway tunnel 2 miles above the bridge, was covered by a depth of 40 feet at midchannel in 1959, with depths of 24 and 36 feet, 500 feet from the United States shoreline and 350 feet from the Canadian shoreline, respectively. Vessels are cautioned not to anchor over or near these tunnels.

(159) A shoal with a least depth of 15 feet extends off the U.S. shoreline between the two tunnels. Buoys mark the upper and lower ends of the shoal.

(160) **Anchorage**.–A designated deep-draft anchorage is in U.S. waters between the upper tunnel and Belle Isle. (See **33 CFR 110.1 and 110.206**, chapter 2, for limits and regulations.)

(161) **Small-craft facility**.–A public docking facility constructed by the city and the Michigan State Waterways Commission is on the N side of the river about 2.8 miles above the Ambassador Bridge. Water, electricity, and sewage pump-out station are available.

(162) The **harbormaster** assigns berths.

(163) **Belle Isle, MI**, about 3 statute miles (2.6 nm) long and 1 statute mile (0.9 nm) wide, is in midriver near the upper end of the Detroit River. **Fleming Channel**, the main river channel, follows between the S side of the island and the Canadian shore to the head of the river at Lake St. Clair. The lower part of the channel is through natural deep water, thence from about midlength of Belle Isle to Lake St. Clair the channel is dredged. The limits of the dredged channel are marked by lighted buoys. **Belle Isle Light** (42°20.4'N., 82°57.6'W.), 30 feet above the water, is shown from a pile on the SE point of the island and marks the N side of Fleming Channel. In June 1998, the controlling depth was 28 feet, except for lesser depths along the edges and shoaling to 20 feet that extends about 100 feet into the channel on the E edge in the vicinity of Peche Island Light.

(164) A 074°–254° measured mile is reported on the S side of Belle Isle.

(165) **William Livingstone Memorial Light** (42°20.8'N., 82°57.3'W.), 58 feet above the water, shown from a white pyramidal monument on the E end of Belle Isle, is a **247°** leading light marking the entrance to the Detroit River from Lake St. Clair.

(166) Generally, only local and pleasure craft use the channel on the N side of Belle Isle. The lower entrance is marked by a lighted buoy which marks a 6-foot shoal that extends 0.5 mile from the W end of Belle Isle. **Scott Middle Ground** is an extensive shoal area, with depths to 1 foot, between Belle Isle and the U.S. shore. Natural channels marked by buoys lead N and S of the shoal. The N channel has a controlling depth of about 18 feet. Above Scott Middle Ground, a 12-foot spot is marked on its N side by a buoy in midchannel N of Belle Isle. The upper entrance to the channel N of Belle Isle is through a dredged channel marked by buoys. In 1996, the controlling depth was 20 feet (6.1 m). A fixed highway bridge (Douglas McArthur Bridge) with a clearance of 32 feet crosses from Detroit to the lower end of Belle Isle.

(167) **Erma Henderson Boat Marina**, developed by the Michigan State Waterways Commission, is on the mainland side of the channel N of Belle Isle. The marina provides transient berths, electricity, water ice, and sewage pump-out. The entrance is marked by private lights.

(168) **Peche (Peach) Island, Ont.**, is off the Canadian shore on the S side of the head of the Detroit River. Extensive shoals are off the W, N, and E sides of the island. **Peche Island Light** (42°20.9'N., 82°56.5'W.), 44 feet above the water, is shown from a cylindrical tower with a triangular red daymark on the NW side of the shoal off the W end of the island. The light marks the SE side of Fleming Channel, but should not be passed close aboard because of protective riprap. A lighted buoy at the W extremity of the shoal marks the N side of the entrance to a buoyed natural deep water channel that leads from Fleming Channel around the S side of Peche Island into Lake St. Clair. The depths in Lake St. Clair at the outer end of the channel are about 8 feet.

(169) **Windmill Point Light** (42°21.5'N., 82°55.8'W.), 42 feet above the water, is shown from a white conical tower on a concrete base on the N side of the entrance to the Detroit River.

(170) **Windsor, Ont.,** is a major industrial city fronting the SE side of the Detroit River from Fighting Island NE to the head of the river.

(171) The following is extracted from **Canadian Sailing Directions CEN304, First Edition.**

(172) *Windsor Harbour (42°19'N., 83°04'W.) extends for 14 miles along the Canadian shores of Detroit River and Lake St. Clair. The SW limit of the harbour is a straight line drawn from Fighting Island North light at the International Boundary in a 046.5° direction to the shore. The NE limit of the port is the northerly extension of the east limit of the city of Windsor to the International Boundary.*

(173) *The city of Windsor, with a population of 191,435 (1991) and a metropolitan area population of 264,800, has more than 500 industries and is a major Canadian automobile manufacturing centre. Windsor is the principal outlet for Ontario agricultural products; major canning companies operating in Windsor take advantage of the extended growing season and crop varieties. Windsor is also the home of Ontario's first major casino.*

(174) *Windsor is a Customs land border reporting station for passengers, general public, and commercial highway traffic; a vessel clearing station for commercial traffic; and a vessel reporting station for pleasure craft.*

(175) *Immigration and agricultural inspection facilities are also available at Windsor.*

(176) *Windsor Harbour is administered by the Windsor Harbour Commission. Regulations, information and rates may be obtained from the office of the Commission at 500 Riverside Drive West, Windsor, Ontario N9A 5K6.*

(177) *Windsor Harbour was used by 2,822 ships, ferries and barges in 1994, with a total of 4.3 million tonnes of cargo. Commodities handled include aggregates, salt, lumber, petroleum, general cargo, grain, other dry and liquid bulk, and railroad barges.*

(178) *The normal navigation season is from April 15 to December. Depending on weather conditions, navigation may begin as early as March 20 and end as late as January 31. Local use of the harbour continues all year.*

(179) *Tugs are available locally or from Detroit. Major repairs can be carried out by Matt Shipbuilding Limited, a division of Romeo Machine Shop. There is no dry dock. Marine radar and radio repairs can be carried out by K.E.L. Communications. Garbage service, heavy lift equipment and fork lift trucks are available. Information on services can be obtained from the Harbour Master.*

(180) *(Windsor Harbour wharves are listed in the table.)*

(181) *(Shipyards in the Great Lakes area are listed in Sailing Directions booklet CEN300, General Information, Great Lakes.)*

(182) *All types of marine supplies, stores, fresh provisions and water are available in Windsor. Complete ship bunkering services are available at the Sterling Fuels wharf.*

(183) *Windsor Harbour Commission monitors VHF Channel 14. Canadian and United States railroads service the harbour. Transport truck lines operate between Windsor and all parts of Ontario as well as the States of Michigan, Ohio, Indiana and Illinois. Windsor Airport offers connections with other airports in Canada.*

(184) *Conspicuous objects in Windsor are the chimney at Hiram Walker and Sons; the lighted Home of Canadian Club sign WSW of Belle Isle; and the church cupolas between the Ford plant and Hiram Walker and Sons.*

(185) **Detroit, Mich.,** fronts the NW side of the Detroit River from the mouth of Old Channel of River Rouge NE to the head of the river. It is a major industrial city and the center of the U.S. automobile industry. The chief waterborne commerce is in coal, petroleum products, limestone, steel, iron ore and pellets, and general and containerized cargo.

(186) **Anchorage.**—Anchorage in the Detroit River is restricted by Federal regulation. (See **33 CFR 162.136,** chapter 2, for regu-

Windsor Harbour-Major Port Facilities

Name		Wharf length Ft (m)	Depth † ft (m)	Elevation †† ft (m)	Remarks
					Note: All information in this table was provided by local authorities for latest conditions. User should consult lo cal auhtories for lat est conditions.
Sterling Fuels		1,000 (305)	27 (8.2)	8 (2.4)	Complete vessel bunkering facility, op er a tion all year, 24 hours a day.
Windsor Harbour Commission					Open Stor age area of 12 acres (5 ha) for stone, sand and bulk materials.
Confederation Dock					Can ada Build ing Ma te rials Co. ce ment mix ing plant oc cu pies NW cor ner of wharf.
Can ada Build ing Materials	Slip	760 (232)			Slip not used for docking vessels.
	River front	315 (96)	27 (8.2)		For self-unloading vessels.
Windsor Harbour Commission					Open stor age ar eas of 25 acres (10 ha) for stone, sand and bulk materials
Lafarge Con struc tion Materials		806 (246)	25 (7.6)	4 (1.2)	For self-unloading ves sels. Op er ated by lafarge Con struc tion Materials.
Adams Cartage	Slip	850 (259)	16 (4.9)		Open stor age for 90,720 tonnes, also cov ered stor age. Not in use in 1995.
	River front	150 (45.7)	25 (7.6)	4 (1.2)	
Pyramid Aggregates		450 (137)	20 (6.1)	3 (0.9)	Open stor age area of 150,000 sq ft (13,935 m^2). Not in use in 1995.
Premier Con crete Dock Ltd.		1,000 (305)	21 (6.4)	3 (0.9)	Used by the own ers for han dling building aggregates and bulk ce ment into silos. Open storage ar eas of 13.4 acres (5.4 ha)
Ca na dian Pa cific Railway		150 (45.7)	25 (7.6)	4 (1.2)	Railroad ferry terminal. Ceased operations in May 1994.
Dieppe Park Dock		800 (244)	26 (7.9)	4 (1.2)	Owned by the City of Wind sor. Used by vis it ing noncommerical ships. Adminstered by the Department of Parks & Recreation.
Ca na dian Na tional Railways		36 (11)	4 (1.2)		Rail way ferry ter mi nal Ceased operations
Ca na dian Salt Co. Ltd		730 (223)	26 (7.9)	7 (2.1)	Open stor age area of 300,000 sq ft (27,900 m^2).
Ojibway Mine					Road and rail way con nec tions.
ADM Grainco Windsor Grain Terminal		1,278 (389)	27 (8.2)	6 (1.8)	An elevator with a capacity of 105,000 tonnes of grain handles soys beans, corn wheat, or oil seeds, as well as meal fgrom the adjacent ADM-Agir Industries Ltd. plant. Mod ern con veyor equip ment for loading and unloading. Access to major rail ways and high ways.
Mortern Limted.	Slip	2,400 (732)	16 to 23 ft (4.9 to 7 m)		Terminal area of 180 acres (73 ha). Direct railway and road con nections.
	River front	750 (229)	27 (8.2)		157.000 sq ft (14,587m^2) of covered storage. 15 fork-lift trucks, 2 mobile cranes. Open stor age area of 50 acres (20 ha).
Ontario hydro J. Clark Keith Generating Station		730 (223)	21 (6.4)	3 (0.9)	Not in use in 1996.
Southwestern Sales West Dock raiway		1,400 (427)	21 (6.4)	2 (0.6)	Open stor age ar eas of 21 acres (8.5 ha). Road and con nec tions.
Ca na dian Salt Co. Ltd. Sandwich Dock		410 (125)	27 (8.2)	4 (1.2)	Op er ated by the Van de Hogen Group for handling in bound ship-ments of lumber.

Windsor Harbour-Major Port Facilities

Name	Wharf length Ft (m)	Depth † ft (m)	Elevation †† ft (m)	Remarks
Kennette Contracting Co. Ltd.	450 (137)	26 (7.9)	5 (1.5)	Open storage area of 21 acres (8.5 ha) for bulk materials. Road and railway connections. Privately owned. Not in use 1995.
Van de Hogen Material Handing Inc.	410 (125)	26 (7.9)	4 (1.2)	Major storage and distributin centre with complete handling capabilities. 56 acres (22.6 ha) of open storage; 80,000 sq ft (7,433m2) of covered storage.
Coco Harbour Terminals	630 (192)	28 (8.5)	4 (1.2)	Available for receiving and storing aggregate.
Hiram Walker and Sons Ltd.	2,200 (671)	24 (7.3)	6 (1.8)	Private wharf receiving bulk grain from self-unloading vessel up to 750 feet (229 m) in length.
Ford Motor Company of Canada Ltd.	1,800 (549)	8 (2.4)		Open storage area 1,800 x 200 feet (549 x 61 m), bulk materialsincluding sand from self-unloading vessels. Private dock.
Southwestern Sales East Dock	700 (213)	28 (8.5)	3 (0.9)	Bulk storage with a rubble wall. Stone and sand discharged by self-unloading vesselsonly.

†Depth below chart datum ††Elevation above chart datum.

lations.) If weather conditions preclude passage through the river, vessels generally hold up or anchor in Lake Erie if northbound or in Lake Huron if southbound. Under stress of weather vessels occasionally anchor on the NW side of the river from 0.6 to 1.5 miles below Belle Isle.

(187) **Towage.**–Tugs to 2,200 and 2,000 hp are available for Detroit from Gaelic Tugboat Co. or Great Lakes Towing Co., respectively. Tugs of the former company moor in the River Rouge; from the latter moor about 1.3 miles S of the River Rouge, on W bank Detroit River.

(188) Arrangements for the Great Lakes Towing Co. tugs are made through the dispatcher in Cleveland at 800-321-3663 or on VHF-FM via remoteantenna. At least 3 hours advance notice is requested. The Gaelic Tugboat Co. dispatcher in Detroit is reached at 313-283-2525 or on VHF-FM channel 16.

(189) Detroit is a **customs port of entry.**

(190) **Quarantine, customs, immigration, and agricultural quarantine.**–(See chapter 3, Vessel Arrival Inspections, and appendix for addresses.)

(191) **Quarantine** is enforced in accordance with the regulations of the U.S. Public Health Service. (See Public Health Service, chapter 1.)

(192) **Coast Guard.**–A Marine Safety Office and a Coast Guard base are at Detroit. (See appendix for address.) Belle Isle Coast Guard Station is on the SE side of Belle Isle.

(193) **Wharves.**–Detroit has numerous deep-draft facilities along the Detroit River. (For a complete description of the port facilities,refer to Port Series No. 45, published and sold by the U.S. Army Corps of Engineers. See appendix for address.) The alongside depths given are reported depths. (For information on the latest depths, contact the operators.) Most of the facilities described have rail and highway connections, and some have water and electrical shore-power connections.

(194) **City of Detroit, Mistersky Power Station Wharf:** 1.4 miles below Ambassador Bridge; 1,049-foot face; 26 feet alongside; deck height, 6 feet; pipelines extend to tank storage, capacity 450,000 barrels; receipt of fuel oil; owned by City of Detroit and operated by City of Detroit, Public Lighting Department.

(195) **Motor City Building Materials, Summit Street Wharf:** W side of the river 0.9 mile below Ambassador Bridge; 480-foot face; 26 feet alongside; deck height, 6 feet; 5 acres open storage; occasional receipt of non-ferrous metal ingots and lumber; owned by Detroit Economic Development Corp. and operated by Motor City Building Materials Inc.

(196) **Detroit Marine Terminals, Scotten Street Wharf:** 0.5 mile below Ambassador Bridge; 2,130 feet of berthing space; 29 feet alongside; deck height, 6 feet; 116,600 square feet covered storage; 22 acres open storage; four crawler cranes to 200 tons; receipt and shipment of containerized and conventional general cargo and steel; shipment of miscellaneous dry bulk commodities and tallow; owned and operated by Detroit Marine Terminals, Inc.

(197) **Detroit Bulk Storage, Atwater Wharf:** (42°19'48"N., 83°01'51"W.); 730 feet of berthing space; 26 feet alongside; deck height, 10 feet; 6.2 acres of open storage; receipt of miscellaneous dry bulk commodities, including salt and aggregates; owned by James Blaine Associates and operated by Detroit Bulk Storage.

(198) **Lafarge Corp., Detroit Terminal Wharf:** (42°19'51"N., 83°01'44"W.); 1,000 feet of berthing space; 28 to 30 feet alongside; deck height, 5 feet; open storage for 21,000 tons of limestone; pipelines extend to storage silos with a capacity for 28,000 tons of cement; receipt of limestone and bulk cement; owned by Lafarge Corp., Great Lakes Region and operated by Lafarge Corp., Great Lakes Region and Koenig Fuel & Supply Co.

(199) **Medusa Cement Detroit Dock:** (42°19'58"N., 83°01'22"W.); 535 feet of berthing space; 28 feet alongside; deck height, 6 feet; vessels discharge into receiving hopper with conveyor to storage silos, capacity 30,000 tons, system operates at 1,500 tons per hour; receipt of bulk cement; owned and operated by Medusa Cement Co., Division of Medusa Corp.

(200) **Detroit Edison, Conners Creek Coal Wharf:** (42°21'17"N., 82°57'17"W.); 800 feet of berthing space; 16 to 21 feet alongside; deck height, 5 feet; open storage for 250,000 tons of coal; 4½ acres of open storage for limestone; receipt of limestone and handling navigational aids; owned by Detroit Edison Co. and operated by U.S. Coast Guard and American Aggregate Co. Inc.

(201) **Supplies.**–Marine supplies and provisions of all types are available at Detroit. Water is available at many of the wharves. Number 1, 2, and 6 fuel oils are available, mostly by barge, but by truck at some locations and by pipeline at the Shell Oil Co. and Texaco docks in River Rouge.

(202) **Repairs.**–Detroit has no facilities for drydocking deep-draft vessels, but medium-draft vessels may drydock at the Nicholson Terminal and Dock Co. Pier, 1.4 miles below the mouth of Short Cut Canal. Detroit Boat Basin, Inc., opposite the N side of Belle Isle, performs repairs to pleasure and occasionally small commercial craft. A 200-ton marine railway with 7 feet over the keel blocks, a 20-ton marine elevator, and machine, carpenter, welding, and paint shops are available. The largest vessel handled by the marine railway is 135 feet.

(203) **Small-craft facilities.**–Detroit has several small-craft facilities, most of which are opposite the head of Belle Isle. Transient berths, gasoline, diesel fuel, water, ice, electricity, sewage pump-out facilities, marine supplies, and a launching ramp are available. Hoists to 50 tons and marine railways to 200 tons are available for hull, engine, and electronic repairs.

(204) The U.S. Postal Service operates a **Marine Post Office** at Detroit. A special mail boat delivers and receives mail from vessels passing through the river, usually meeting them at the Ambassador Bridge. Arrangements can be made with 1 hour advance notice by contacting agent "Westcott" on VHF-FM channels 10 or 16.

(205) **Communications.**–Detroit has excellent rail and highway connections. The city has several airports.